

21(10)

AUTHORS: Ivanov, P. A., Krutogolov, V. D., SOV/119-58-12-13/13
Engineers

TITLE: Viscosity Measurement in a Hermetically Sealed Device
(Izmereniye vyazkosti v germetizirovannom reaktore)

PERIODICAL: Priborostroyeniye, 1958, Nr 12, pp 31 - 31 (USSR)

ABSTRACT: This method can be used in cases where the viscosity of volatile or poisonous substances must be measured. It is due to the Gor'kovskiy nauchno-issledovatel'skiy fiziko-tekhnicheskii institut (Gor'kiy Scientific Research Institute of Physics and Engineering). An electrical viscosimeter EVI-55-R is used as a measuring instrument. The indication error is given to be 2.5 % at low readings and 1 % at normal viscosities. If a EPP-09 or a EPD potentiometer is used, the results can be plotted directly on a graph. The principle of this method is based upon the fact that the angle between the voltage applied to the stator winding of a single-phase synchronous midget motor and the counter-emf generated in this winding is measured. The device consists of two parts, the measuring parts, and an extensible part to which the

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Viscosity Measurement in a Hermetically Sealed Device SOV/119-58-12-13/13

transducer and the midget motor is mounted. The individual parts are portrayed in photographs. A special coating protects the most important parts of the device against corrosion. The device was subjected to exhaustive testing which revealed that it furnishes well reproducible results. There are 2 figures.

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USCOMM-DC-60,969

S/119/61/000/001/011/013
B019/B067

AUTHORS: Ivanov, P. A., Engineer, and Krutogolov, V. D., Engineer
TITLE: Laboratory Electroviscosimeter of the Type ~~ЭВ~~-58Л (EVI-58L)
PERIODICAL: Priborostroyeniye, 1961, No. 1, p. 30

TEXT: The viscosimeter described was developed at the Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut (Gor'kiy Research Institute of Physics and Technology). It allows periodic and continuous measurements of viscosity under laboratory conditions. The temperature of the liquid is kept constant by a thermostat. The operation of the instrument is based on the measurement of a phase shift of an auxiliary voltage which is proportional to the viscosity of the liquid. It has five measuring ranges (0-100, 0-200, 0-2000, 0-20 000, and 0-200 000 centi poise), the change from one measuring range to the other takes place by changing the nozzle. The measuring error is below 1%. The instrument consists of a control panel a pick-up with a thermostat, and a grid instrument. The control panel contains the measuring part of the instrument and the control

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Laboratory Electroviscosimeter of the
Type *ЗЕН*-587 (EVI-58L)

8/119/61/000/001/011/013
B019/B067

devices. The pick-up, a synchronous micromotor and the nozzle are fastened to a stand. Temperature is controlled by two heater elements with 1100 and 1600 w with a contact thermometer. There are 2 figures and 3 Soviet references.

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IVANOV, P.A.; KRUTOGOLOV, V.D.

The EVI-57PL universal electric viscosimeter. Priborostroenie no.7:26-
27 J1 '62. (MIRA 15:7)

(Viscosimeter)

S/119/63/000/002/011/014
A004/A127

AUTHORS: Devitsyn, Ye.D., Ivanov, P.A., Krutogolov, V.D.

TITLE: automatic 3BM-60 AT (EVI-60AT) electric viscometer for viscosity measurements in the flow

PERIODICAL: Priboroostroyeniye, no. 2, 1963, 27

TEXT: The EVI-60AT electric viscometer, developed at the Issledovatel'skiy fiziko-tekhnicheskiy institut (Physico-Technical Research Institute) of the Gor'kiy State University im. N.I. Gorbachevskiy is based on the principle of converting the viscosity magnitude into electric voltage. The phase of this voltage varies in proportion to the viscosity measured. The mentioned voltage is fed to the arm of a semi-balanced bridge whose output voltage is fed to a phasesensitive detector and further, for recording, to the input of an automatic potentiometer. An automatic zero correction is provided for in fixed time intervals. The device is intended for viscosity measurements in the range of 0 - 1, 0 - 10, 0 - 20 poise at temperatures in the working chamber of up to 100°C. The relative error of the viscometer does not exceed 2%

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Automatic 3BM -60 AT(EVI-60AT) electric ...

S/119/63/000/002/011/014
A004/A127

over all the measurement ranges. The author gives a detailed description of the viscometer units, design characteristics and functioning and present the EVI-60AT viscometer block diagram. There are 2 figures.

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DEVITSYN, Ye.D., inzh.; IVANOV, P.A., inzh.; KRUTOGOLOV, V.D., inzh.;
EYGINGORIN, M.Ya., inzh.

Equipment for automatic reception of the fundamental information on
production. Mekh.i avtom.proizv. 17 no.7:42-44 S '63.
(MIRA 16:10)

IVANOV, P.A.; ERUICCOLOV, V.D.

Rotary viscosimeter with a phase-amplitude converter. Izv. tekhn.
no.6:70-71 Jo 165. (MIRA 18:8)

VOLODIMIROVA, T.N.; KRUTOGOLOVA, F.M.; FILATOV, A.N., professor, nauchnyy rukovoditel'.

Application of hemotherapy in ulcers in ambulant patients. Terap.arkh.25
no.3:31-35 My-Je '53. (MLA 6:9)

1. Leningradskiy ordena Trudovogo Krasnogo Znameni institut perelivaniya
krovi. (Ulcers) (Blood as food or medicine)

KRUTOGOROV, Yu.

~~Afanasii Andrianovich Malygin.~~ Zhil.-kom.khoz. 7 no.7:23-25

'57.

(MIRA 10:10)

(Malygin, Afanasii Andrianovich)
(Gas governors)

KRUTOCHOROV, Yu.

Sh08 (Headquarters of the Pioneer detachment orchard). IUn.mt.
no.12:7-9 D '57. (MIRA 10:12)

(School gardens)

KRUTOGOROV, Yu.

Reasons for the slow development of municipal improvements in
the city of Astrakhan, Zhil.-kom. khos. 8 no.2:12-13 '58.

(MIRA 11:2)

(Astrakhan--Landscape gardening)

(Astrakhan--Street cleaning)

KRUTOGOROV, Yu.

Efficiency promoter of the Kalinin water supply system.

Zhil.-kom.khos. 8 no.4:24-26 '58.

(MIRA 11:5)

(Kalinin--Pumping stations)

(Automatic control)

KRUTOGOROV, Yuriy

City of Bashkirian petroleum industry workers. Zhil-kom. khoz.
8 no.5:9-10 '58. (MIRA 11:6)
(Oktyabr'skiy--Municipal services)

KHUTOGOHOV, Yu.

Landscape gardener and innovator. Zhil.-kom. khoz. 8 no. 8:21-23
'58. (MIRA 11:8)

(Chuev, Vasilii Vasil'evich)

KRUTOGOROV, Yu.

Work of Krasnodar road builders. Zhil.-kom. khoz. 8 no.11:19-20
'58. (MIRA 11:12)

(Krasnodar--Road construction)

KRUTOOROV, Yu. (g.Tikhvin, Leningradskaya oblast')

Skillful organiser. Zhil.-kom.khoz. 9 no.7:18-19 '59.
(MIRA 12:11)

(Zakharov, Vasilii Zakharovich)

KRUTOGOROV, Yu. (g.Tyumen')

Controlling the implementation of safety measures. Zhil.-kom.
khoz. 9 no.12:7-8 '59. (MIRA 13:4)
(Tyumen'--Industrial safety)

KRUTOGOROV, Yu. (Leningrad)

Efficiency promoters of the mechanical plant of the Leningrad
Street Cleaning Trust. Zhil.-kom.khoz. 10 no.2:16-17 '60.
(MIRA 13:5)
(Leningrad--Street cleaning machinery)

KRUTOGOROV, Yu.

A communist labor shop. Zhil.-kom. khoz. 10 no.7:4 '60. (MIRA 13:10)
(Street cleaning machinery--Maintenance and repair)

KHUTOGOROV, Yu. (g.Orekhovo-Zuyevo, Moskovskaya oblast')

Work of the city cleaning trust in Orekhovo-Zuyevo. Zhil.-kom. khos.
10 no.11:27-28 '60. (MIRA 13:11)
(Orekhovo-Zuyevo--Refuse and refuse disposal)

KRUTOGOROV, Yu. (g.Bryansk)

Innovator working in the Bryansk water supply system. Zhil.-kom.
khos. 11 no.2:16 P '61. (MIRA 14:5)
(Bryansk--Water supply)

KIUTOGOROV, Yu. (g.Penza)

Why plantings are poorly tended in Penza. Zhil.-kom. khoz. 11
no.3:8-10 Mr '61. (MIRA 14:3)
(Penza--Landscape gardening)

KRUTOGOROV, Yuriy (Krasnodar)

Meet Faina Vinogradova. Zhil.-kom. khoz. ll no.8:14-15 Ag '61.
(MIRA 14:9)

(Krasnodar--Landscape gardening)

KRUTOGOROV, Yu.

The story of a certain lawsuit. Zhil.-kom. khoz. 12 no. 2:26-27 F 162.

(Municipal services—Equipment and supplies)

(MIRA 15:7)

KRUTOGOROV, Yu.

It's time to put and end to dumps! Zhil.-kom. khoz. 11 no.12:
23-24 D '61. (MIRA 16:11)

RAFAL'SON, D.I.; KULAKOVA, M.N.; KRUTOGOLOVA, F.M.; TETERINA, Z.K.;
LAZAREVA, M.S.; ORLOVA, N.N.; BARANOVA, L.P.; NAZAREVSKAYA, O.V.;
SHIBA, Yo.P.; MEL'CHENKO, K.M.; ZELENKOVSKAYA, A.N.

Significance of blood transfusion in the transmission of
epidemic hepatitis. Zhur.mikrobiol., epid. i immun. 42
no.9:81-85 S '65. (MIRA 18:12)

1. Leningradskiy institut perelivaniya krovi, 1-ya, 2-ya i
3-ya gorodakiye stantsii perelivaniya krovi i Leningradskaya
gorodskaya sanitarno-epidemiologicheskaya stantsiya. Submitted
February 29, 1964.

TOMPAKOV, B.D., inzh.; KRUTOGORSKIY, K.V., inzh.

New insulators. Vest. elektroprom. 32 no.1:33-34 Ja '61.
(Electric insulators and insulation) (MIRA 14:3)

KRUTOPOROKH, D., kand. sel'skokhozyaystvennykh nauk,; SMIRNOV, V.

Remodeling two-row cow barns. Sel'. stroi. 13 no. 9:9-11 S '58.

1. Direktor sovkhosa "Kalachyevskiy" Voronezhskoy oblasti (for Krutoporokh), 2. Prorab sovkhosa "Kalachyevskiy" (for Smirnov).
(Dairy barns)

MAYATIN, A.A.; KRUTOUS, M.D.; GITARSKIY, V.S.; BORISUKO, V.S.; GORELIK, M.M.;
VINOGRAOV, N.P.; KAUFMAN, D.I.; SIAYIN, I.S.; GEFASHVILI, M.N.;
KIRPENEV, N.K.; FOZENBERGER, N.A.; NAFKHANENKO, Z.S.; KIPUS, L.A.;
ZAYCHENKO, I.V.

Innovations. Bum. i der. prom. no.3:58-59 J1-S '64.

(MIRA 17:11)

SPERANSKAYA, I.M.; KRUTOUS, M.P.; TIMOSHENKO, V.I.

Some petrographic characteristics and properties of feldspars
in igneous rocks of the Armanskaya volcanic and plutonic
association (Maritime Territory). Trudy Lab. paleovulk. Kazakh.
gos. un. no.56:73-83 '63. (MIRA 16:6)

1. Severo-Vostochnoye geologicheskoye upravleniye.
(Maritime Territory—Feldspar)

KRUTOUS, Ye.B., inzh.

Machine for washing ropes. Mashinostroitel' no.3:22
Mr '60. (MIRA 13:6)
(Rope--Cleaning)

KRUTOV, A.; kandidat tekhnicheskikh nauk.

A hand machine for the preparation of cane slabs. Gor.1 slo'.stroj.
no.6:24 Js '57. (MIRA 10:10)

(Building materials)

KRUTOV, A.A.

At the geophysical station. Put' i put.khoz. 6 no.2:21 '62.
(MIRA 15:2)

1. Nachal'nik dorozhnoy geofizicheskoy stantsii na Privolzhskoy
doroge, g. Saratov.

(Metereological stations) (Hydrometereology)

SAVCHENKO, S.M.; KRUTOV, A.N., redaktor; CHISTYAKOVA, A.V., tekhnicheskiy redaktor

[Machining parts on metal-cutting tools with cutters designed by V.A.Kolesov] Obrabotka detalei na metalloreshushchikh stankakh instrumentami s geometriey V.A.Kolosova. Moskva, Gos. izd-vo oboronnoi promyshlennosti. 1953. 86 p. (MLRA 7:10)
(Metal cutting) (Machine tools)

69924

S/109/60/005/05/012/021
E140/E435

9.3240

AUTHOR: Krutov, B.N.

TITLE: The Maximum Attainable Bandwidth Parameters of Wideband Amplifiers 1/5

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 5, pp 818-826 (USSR)

ABSTRACT: The article analyses the most general case of a multi-stage amplifier consisting of m identical n -stage groups of staggered circuits. The overall frequency characteristic of each group of staggered circuit has a maximally-flat shape. However, this is not a limitation in principle. The cases of single-tuned stages and double-tuned stages are considered. In the limiting case the parameters for maximally-flat and Chebyshev frequency characteristics should be close to each other. This is because in the limit both frequency characteristics coincide. Since it is simpler to calculate the limiting parameters for maximally-flat curves it is assumed that they fully characterize amplifiers composed of simple stagger-tuned circuits.

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S/109/60/005/05/012/021
E140/E435

The Maximum Attainable Bandwidth Parameters of Wideband Amplifiers

There are 4 figures and 3 references, 2 of which are
Soviet and 1 English.

SUBMITTED: December 15, 1958

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KHUTOV, B.P.

KHUTOV, B.P., voditel' Sverdlovskogo tramvaya.

[My method of operating a streetcar] Moi metod vozhdeniia tram-
vaya. Moskva, Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR,
1953. 39 p. (MLRA 7:8)
(Street railroads)

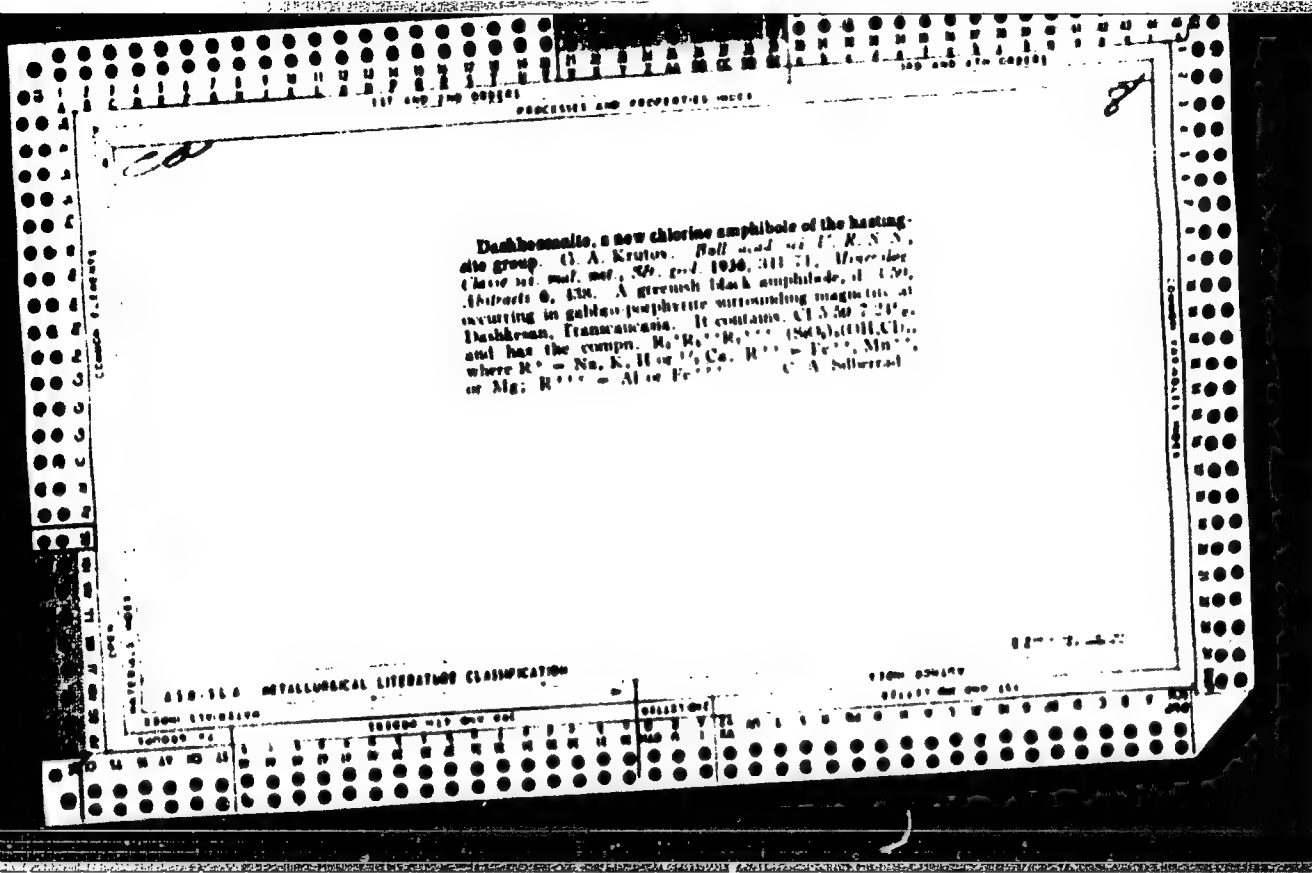
KRUTOV, D.N.; TERMER, V.Yu.; DOSHCHATOV, V.V.; KUZNETSOV, I.N.; GUZHOV, N.N.;
CHERNYAVSKIY, V.V.

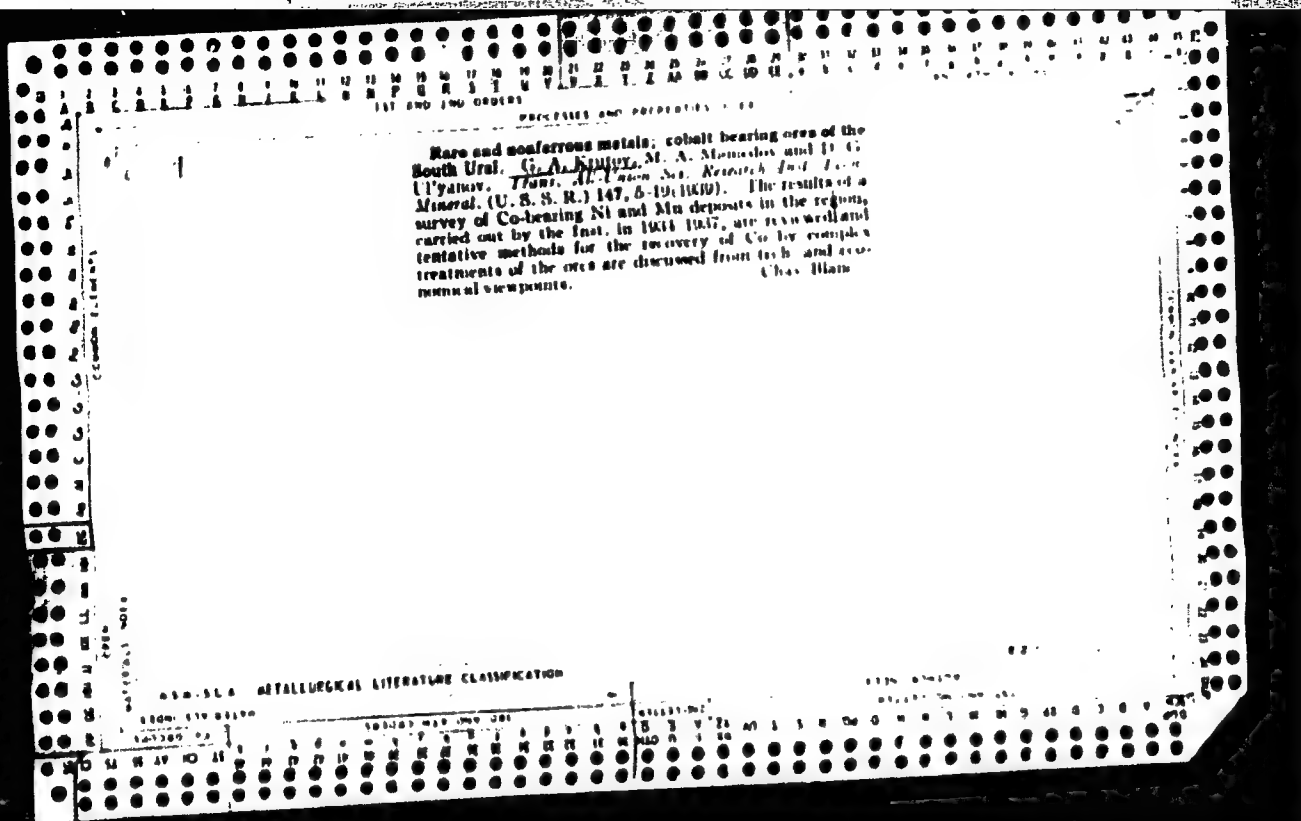
Electronic contactless system for primary accounting. Kauch.
1 rez. 23 no.9:34-37 S '64. (MIRA 17:11)

1. Yaroslavskiy proyektno-tekhnologicheskii i nauchno-issledovatel'skiy institut i Yaroslavskiy shinnyy zavod.

Cobalt deposits in the Caucasus. G. A. Krutov, G. A. Kremukhova and N. V. Burmichev. *Trudy Akad. Nauk SSSR, Research Inst. Geol. Mineral.* No. 82, 3-67 (in English 70-1) (1953).—The Dashbaskan deposit is situated 48 kilometers northwest of the town of Gyandzhar, Azerbaijan Soviet Socialist Republic. A thick succession of Jurassic andesite tufts (contg. a bed of breccia up to 120 m. thick) is folded into a gentle syncline cut by a large mass of granodiorite and smaller more basic and more acidic intrusions. The upper part of the limestone and the lower part of the overlying tuff have been extensively altered and replaced by magnetite and hematite. Arsenopyrite, cobaltite, pyrite, molybdenite, chalcopyrite, barite, sphalerite and galena occur in this zone in bunches, veins and disseminated form. The deposits were formerly worked for Fe and Co. Four deposits in the northern Caucasus are described. They do not contain Co in comm. quantities. K. H. Rockwith

ASAC-314 ORIGINATOR'S LITERATURE CLASSIFICATION





15-57-7-9368
Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,
p 91 (USSR)

AUTHORS: Krutov, G. A., Petrova, Ye. A.

TITLE: Cobaltite in the Serpentine of the Khalilovo Region
in the Southern Urals (Kobal'tin v serpentinitakh
Khalilovskogo rayona na Yuzhnom Urale)

PERIODICAL: Tr. Mosk. geol. razved. in-ta, 1956, Nr 29, pp 69-72

ABSTRACT: A complex group of volcanic and shale layers of
Devonian-Silurian age occurs in the Khalilovo region
near the village of Ishkinino. It is transected by
intensively serpentized dunites and peridotites.
Zones of mineralization occur in the serpentinites
that have been changed to talc-carbonate rocks and
in serpentinites that were derived from brecciated
metadunites. Pyrite-chalcopyrite-pyrrhotite deposits
with pentlandite, cubanite, magnetite, and chromite

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15-57-7-9368

Cobaltite in the Serpentine (Cont.)

are found in the first occurrence. The second consists of lenses and nests of cobalt minerals. Cobaltite is the chief constituent of these lenses and nests, forming thick disseminations of well-formed octahedral crystals, commonly accompanied by small quantities of sulfides. In polished sections, the cobaltite of these deposits generally etches easily, not only with permanganate but also with HNO_3 , displaying a zonal structure of euhedral crystals. This corrosion feature is in contrast to cobaltite from other deposits. This inhomogeneity of the cobaltite crystals has been produced by admixtures of Ni, the quantity of which is greatest in the peripheral zones. The chemical composition is: Co 28.85 percent, Ni 5.32 percent, Fe 3.26 percent, As 43.75 percent, S 18.81 percent, insoluble residue in $\text{HCl} + \text{HNO}_3$ 2.52 percent, Cu 0.01 percent: total 99.52 percent. These proportions approach the theoretical conditions of isomorphous Co-Ni substitution. It may be assumed that the cobaltite crystals grew during changing temperature conditions from relatively high temperatures (lower Ni content) to lower

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15-57-7-9368

Cobaltite in the Serpentine (Cont.)

temperatures (peripheral enrichment of Ni, producing zoned crystals of cobaltite). The general sequence of mineralization in the serpentinites is marked by the following three stages: 1) formation of pyrrhotite deposits (with pentlandite, cubanite, pyrite, chalcopyrite, magnetite, and chrome-spinels); 2) formation of cobaltite in vein networks cutting the pyrrhotite deposits, and as isolated lenses and nests accompanied by small quantities of arsenopyrite, pyrite, and magnetite of a second generation; and 3) formation of sulfide deposits (chalcopyrite, pyrite, and rare sphalerite). The source of the arsenic ores in the serpentinites of the Khalilovo region is unknown, but there can be no doubt that the mineralization is associated with hydrothermal activity, superimposed on late magmatic segregations of Fe, Cu, and Ni sulfides. The nature of the alteration of the serpentinite host rocks--the development of talc, chlorite, carbonate, and asbestos--apparently indicates an association of the arsenian mineralization with acidic or intermediate-acidic intrusions.

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O. V. Bryzgalin

KRUTOV, G.A.; APHEL'TSIN, F.R., red.; PANOVA, A.I., red.; IVANOVA, A.G.,
tekhn.red.

[Cobalt deposits] Mestorozhdeniia kobal'ta. Moskva, Gos.
nauchno-tekhn.isd-vo lit-ry po geologii i okhrane neдр, 1959.
231 p. (MIRA 13:5)

(Cobalt)

KRUTOV, G.A.

Role of the halogen process in the formation of contact-metasomatic
deposits. Vest. Mosk. un. Ser. 4: Geol. 15 no.6:40-45 N-D '60.
(MIRA 14:1)

1. Kafedra mineralogii Moskenskogo universiteta.
(Metasomatism) (Halogens)

GLAZKOVSKIY, A.A.; KRUTOV, G.A., nauchnyy red.; ZVEREV, L.V., nauchnyy red.; MATIS, T.I., red. izd-va; BYKOVA, V.V., tekhn. red.

[Industry's requirements as to the quality of mineral raw materials] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane neдр. No.55.[Cobalt] Kobal't. Nauch. red. G.A.Krutov i L.V.Zverev. Izd.2., perer. 1961. 49 p. (MIRA 15:2)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.

(Cobalt)

BARSANOV, G.P., doktor geol.-mineral. nauk, prof., red.; KRUTOV, G.A.,
prof., doktor geol.-mineral. nauk, red.; GORSHKOV, G.P., prof.,
doktor geol.-mineral. nauk, red.; SERGEYEV, Ye.M., doktor geol.-
mineral. nauk, prof., red.; ZABOROVSKIY, A.I., prof., doktor fiz.-
mat. nauk, red.; LEONOV, G.P., red.; LAZAREVA, L.V., tekhn. red.

[Papers of the Faculty of Geology of Moscow University; for the
21st session of the International Geological Congress] Sbornik
trudov geologicheskogo fakul'teta Moskovskogo universiteta; k
XXI sessii Mezhdunarodnogo geologicheskogo kongressa. Moskva,
Izd-vo Mosk. univ., 1961. 222 p. (MIRA 15:2)

(Geology--Congresses)

BOEVI ZHANGKAYA, L.S.; KIRYLOV, G.A.; MAKHMUKOV, A.I.

Alloysite from the Southern Dashkesan iron ore deposit
(Azerbaijan S.S.R.). Dokl. AN SSSR 161 no.5:1181-1183 3p
'65. (MIRA 18:5)

I. Kirovabadzkiy pedagogicheskii Institut i Mavzovskiy gosudarstvennyi
universitet. Submitted October 21, 1964.

РЕНД, 1. 0.

28496

Travosmyenyakh dlya polyevykh syevooborotov V amurskoi. Oblasti. Sov. Agromeliya,
1949, No. 9, S. 67-72.

SO: LETOPIS No. 34

Dissertation: "On the Proper Time and Methods of Grass Layer Tillage Under the Conditions of the Amur Region." All-Union Sci Res Inst of Fertilizers, Agricultural Engineering and Soil Science imeni K.K. Gedroyets, 30 Dec 47.

SO: Yechernyaya Moskva, Dec, 1947 (Project #17836)

SHVETSOV, A.P., dotsent, kand.ekon.nauk, glavnyy red.; KRUTOV, I.V., dotsent, kand.ekon.nauk, red.; TOPILIN, P.K., prof., red.; NIKOLAYEV, N., red.; LUKASHEVICH, V., tekhn.red.

[Economic laws of socialism; a collection of articles] Ekonomicheskie zakony sotsializma; sbornik statei. Saratovskoe knizhnoe izd-vo, 1958. 309 p. (MIRA 12:4)

1. Zaveduyushchiy kafedroy politicheskoy ekonomii Saratovskogo gosudarstvennogo universiteta im. N.G.Chernyshevskogo (for Shvetsov).
2. Zaveduyushchiy kafedroy politicheskoy ekonomii Saratovskoy vysshey partiynoy shkoly (for Krutov).
3. Zaveduyushchiy kafedroy politicheskoy ekonomii Saratovskogo ekonomicheskogo instituta (for Topilin).

(Economics)

PETROV, N.G.; KRUTOV, I.V.; POPEKHIN, G.S.

. Effect of the length of delaying on the results of consecutive
blasting. Fiz. mekh. svois., dav. i razr. gor. porod. no.2:131-
137 '63. (MIRA 17:1)

KRUTOV, Mikhail Illarionovich; MARKOV, A.G.; SAMODANOVA, Valentina
Mikhaylovna; VIATKIN, S.V.; PESTIKYAKOV, A.I., red.; GUREVICH,
M.M., tekhn. red.

[Catalog of spare parts for the machinery used in the cultivation of sugar beets] Katalog zapasnykh chastei k mashinam po
vozdel'yvaniyu sakharnoi svekly. Moskva, Gos. izd-vo sel'khoz.
lit-ry, 1959. 72 p. (MIRA 14:12)
(Sugar beets) (Agricultural machinery)

.. KRUTOV, Mikhail Illarionovich; SAMODANOVA, Valentina Mikhaylovna;
PESTRYAKOV, A. I., red.; GUREVICH, M. M., tekhn. red.

[Spare parts list for machines used in flax and hemp cultivation]
Katalog zapasnykh chastei k mashinam po vozdeleyvaniyu l'na i
konopli. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1959. 146 p.
(Flax) (Hemp) (MIRA 14:12)

L-15999-63 FA/EWT(d)/FAS/EWT(1)/EWT(m)/FOG(w)/FS(v)-2/BDS/T-2/
EEO-2/ES(v)/ES(a)/ES(j)/ES(c)/ES(k)/ES(t)-2 AEDC/AFFTC/ASD/AFMDC/ESD-3/
AFWL Pe-4/Pb-4/Pi-4/Po-4/Pq-4 TT/GW

ACCESSION NR: AP3004388

S/0084/63/000/007/0018/0019

AUTHOR: Krutov, N. 99

TITLE: Aircraft today, spacecraft tomorrow [Rocket plane]

SOURCE: Grashdanskaya aviatsiya, no. 7, 1963, 18-19

TOPIC TAGS: boostglide vehicle, passenger transport, interplane-
tary station communication, rocket plane

ABSTRACT: The boostglide vehicle or rocket plane will combine the features of a missile and a supersonic aircraft. The ship would be launched like a ballistic missile, climb rapidly through the denser layers of atmosphere, and then glide into a ballistic trajectory. Its descent and landing characteristics would be similar to those of an airplane. The vehicle will be equipped with wings, whose area can be changed during flight. The rocket plane will probably fly at an altitude of 150 to 200 km at speeds permitting the use of aerodynamic lift and centrifugal force. The rocket plane will be six times more economical to fuel than a supersonic
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ACCESSION NR: AP3004388

aircraft and its air speed will be much greater. The rocket plane could be used as a principal means of supplying and communicating with space stations. Automatic controls will be used very extensively because the flight of the rocket plane will be so complicated, especially on takeoff and landing, that manual control could not be maintained.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 20Aug63

ENCL: 00

SUB CODE: AS, AC

NO REF SOV: 000

OTHER: 000

Card 2/2

KHRISTOFOROV, I.D., prof.; MOREV, M.V., veter. vrach.; KRUTOV, N.A.,
veter. vrach

Some data on the effect of temporary and prolonged supplementary
feeding of chickens with potassium iodide in order to increase
their egg production. Trudy SZVI 11:147-153 '62.

(MIRA 16:7)

(Potassium iodide—Physiological effect)
(Saratov Province—Eggs—Production)

KRUTOV, N.V., inzhener.

Remarks on S.A. Gorodetskii's article: "Using the adsorption method
for controlling the moisture of the insulation of transformer windings."
Elek. sta. 25 no. 3:59 Nr '54. (MIRA 7:6)

(Electric transformers) (Gorodetskii, S.A.)

KRUTOV, N.V., inzhener; SMIRNOVA, M.I., inzhener.

Device for controlling the solder of electric motor collectors. Ener-
getik 5 no.4:21-22 Ap '57. (MLRA 10:6)

(Electric motors)

5.7.7.7.

KRUTOV, N.V., inzh.; GORNY, V.A., inzh.

Antivibration device for stationary galvanometers. Energetik 5
no.12:20 D '57. (MIRA 10:12)
(Galvanometer)

KEUTOV, P., nauchnyy sotrudnik

"October" radio station. Radio no. 4:3-4 Ap '60.
(MIRA 13:8)

1. Tsentral'nyy voyenno-morskoy muzey.
(Radio in propaganda)

KRUTOV, P., kandidat tekhnicheskikh nauk.

Building abroad. Stroitel' 2 no.2:12-13 P '56. (MLBA 9:12)
(Rumania--Precast concrete construction)

KRUTOV, P., kandidat tekhnicheskikh nauk.

Unit for manufacturing cement-sand tiles. Stroi. mat., izdel.
i konstr. 2 no.7:35-36 J1 '56. (MLRA 9:10)

1. Direktor Instituta gorodskogo i sel'skogo stroitel'stva.
(Rumania--Tiles)

KHUTOV, P.I., kand.tekhn.nauk, red.; KUDIN, V.M., nauchnyy red.

[Collection of technical papers; special publication on the use of reeds in building] Sbornik tekhnicheskoi informatsii; spetsial'nyi vypusk o primeneni kamysha v stroitel'stve. Moskva, Izd. Biuro tekhn.pomoshchi Glav. upr.kapital'nogo stroit. MSKh RSFSR, 1957. 65 p. (MIRA 11:5)

1. Nauchno-issledovatel'skiy institut sel'skogo stroitel'stva. (Reed (Botany))

KRUTOV, P., kand.tekhn.nauk.

Using readwork panels in housing construction. Gor. 1 sel'. stroi.
no.12:18-19 D '57. (MIRA 11:2)
(Astrakhan--Reed (Botany))

KARASIK, Moisey Naumovich; KRUTOV, Pavel Ivanovich; STRELKOVA, N.A., red.;
ATROSHCHENKO, L.Ye., tekhn. red.

[Economical farm buildings] Ekonomichnye sel'skokhoziaistvennye
postroiiki. Moskva, Izd-vo "Znanie," 1958. 30 p. (Vsesoiuznoe
obshchestvo po rasprostraneniuiu politicheskikh i nauchnykh snanii.
Ser.5, no.32) (MIRA 11:12)

(Farm buildings)

KRUTOV, P., kand. tekhn. nauk

Soil-concrete. Stroitel' no. 8:24-26 4g '58.

(MIRA 11'8)

1. Direktor Nauchno-issledovatel'skogo instituta Sel'stroya.
(Building materials)

KRUTOV, P.^I, kand. tekhn. nauk

Using reed as reinforcing and heat insulating material in
architectural structures. Stroi. mat. 4 no. 7:14-16 J1 '58.
(MIRA 11:7)

(Reed(Botany))
(Reinforced concrete)
(Insulation(Heat))

KRUTOV, P., kand. tekhn. nauk (g. Moskva)

Reed concrete. Prom.koop. 12 no.11:20-21 N '58. (MIRA 11:11)
(Precast concrete) (Reed(Botany))

KRUTOV, P. I. kand. tekhn. nauk

Science works for rural building. Sel'. stroi. 13 no. 10:23-24
0 '58. (MIRA 11:10)

1. Direktor instituta "Misel'stroy."
(Building research)

KRUTOV, P., kand. tekhn. nauk

Harvesting and storing reed. Sel'.stoi. 13 no.12:14-16
D '58. (MIRA 12:1)

(Reed (Botany))

DRELING, P.Ye.; KHUTOV, P.I., kand.tekhn.nauk, red.; KHAVIN, B.N., red.
isd-va; SHERSTNYA, N.V., tekhn.red.

[Instructions for using organic plasticizing soap-stock wastes
in making mixed and lime mortars] Ukazaniia po primeneniiu v
smeshannykh i izvestkovykh rastvorakh organicheskogo plastifika-
tora - otkhoda soapstoka. Moskva, Gos.isd-vo lit-ry po stroit.,
arkhit. i stroit.materialam, 1959. 14 p. (MIRA 13:6)

1. Nauchno-issledovatel'skiy institut sel'skogo stroitel'stva.
(Mortar) (Industrial wastes)

RACHKOV, N.F., kand.tekhn.nauk; KRUTOV, P.I., kand.tekhn.nauk

Local materials as wall filler for rural buildings with precast
concrete framing elements. Stroi. mat. 7 no.7:6-9 J1 '61.
(MIRA 14:7)

(Walls) (Building materials)

KRUTOV, P., kand.tekhn.nauk

Some results of scientific investigations of the Scientific
Research Institute of Rural Construction. Sbor. nauch. soob.
NIIsel'stroia no.2:3013 '60. (MIRA 15:5)

1. Direktor Nauchno-issledovatel'skogo instituta sel'skogo
stroitel'stva.

(Building research) (Farm buildings)

KRUTOV, P., kand.tekhn.nauk; SHCHEDRIN, A., kand.tekhn.nauk;
PRESTIN, F., arkhitektor

Sheep houses made of precast reed-reinforced concrete.
Sol.stroi. 15 no.1:25-26 Ja '60. (MIRA 15:7)
(Precast concrete construction)
(Sheep houses and equipment)
(Reed products)

KRUTOV, P., kand.tekhn.nauk

Use of reed-reinforced concrete in machine construction. Sel'. stroi.
16 no.12:20-21 D '61. (TRA 15:2)
(Reed products)(Precast concrete construction)

KRUTOV, P., kand.tekhn.nauk

Using straw in rural construction. Sel'.stroi. 16 no.2;14-15
F '62. (MIRA 15:12)

(Straw)
(Insulating materials)

KRUTOV. P.

Good start. Sov. profsoiuzy 18 no.19:10-11 O '62. (MIRA 15:9)

1. Zamestitel' nachal'nika Groznenskogo territorial'nogo
proizvodstvennogo upravleniya, Checheno-Ingushskaya ASSR.
(Chechen-Ingush A.S.S.R.—Trade unions—Officers)
(Chechen-Ingush A.S.S.R.—Agricultural administration)

KRUTOV, P., kand. tekhn. nauk

The Rural Construction Research Institute and the problems
facing it. Sel'. stroi. 18 no.5:3-5 My '63. (MIRA 16:6)

1. Direktor Nauchno-issledovatel'skogo instituta sel'skogo
stroitel'stva.

(Building research)

KRUTOV, Pavel Ivanovich, kand. tekhn. nauk; SHIROKOVA, G.M., red.izd-
va; MIKHEYEVA, A.A., tekhn. red.

[Using reed in construction] Primenenie kamysha v stroitel'-
stve. Moskva, Gosstroizdat, 1963. 202 p. (MIRA 16:8)
(Reed (Building material))

SOV/99-59-2-5/12

30(1)

AUTHOR: Krutov, S.N. Engineer (Sverdlovsk)

TITLE: Using a DM-200-type Sprinkler in Irrigation Systems
With Open Canal Networks (Primeneniye dozhdeval'noy
mashiny DM-200 na orositel'nykh sistemakh s otkrytoy
set'yu kanalov)

PERIODICAL: Gidrotekhnika i melioratsiya, 1959, Nr 2, pp 28-30
(USSR)

ABSTRACT: The author stresses the superiority of a DM-200-type
sprinkler, with a sprinkling range of 200 m, over the
sprinklers of DM-120, DDA-100M, and DDP-30s-types.
Having been used in the Podsobnoye khozyaystvo Magni-
togorskogo metallurgicheskogo kombinata (Auxiliary
Farm of the Magnitogorsk Metallurgical Combine) for
four years, it is now considered suitable for ser-
vice on large irrigated, vegetable farms. The above
sprinkler is especially well-suited for irrigation
systems with open canals, since their construction
costs are 1.5 to 2 times lower than those of the

Card 1/2

30V/99-59-2-5/12

Using a DM-200-type Sprinkler in Irrigation Systems With Open
Canal Networks

systems with covered canals. In addition, these
open canal systems must be equipped with dividing
installations for water level control. There is
1 diagram and 1 graph.

Card 2/2

KRUTOV, V.

~~XXXXXXXXXXXXXXXXXXXX~~
Reduce the cost of the administrative apparatus and improve its
operation. Prem. keep. no. 9:5-7 8 '56. (MLRA 9:10)

1. Predsedatel' pravleniya Stalinskogo Oblpremsveta.
(Cooperative societies)

SEMIN, V., starshiy ~~tekhnolog~~; KRUTOV, V., starshiy inzhener

Translate into life the new and the progressive. Mor. flot 22 no.7:39
Jl '62. (MIRA 15:7)

1. Nakhodkinskiy port, (for Semin). 2. Otdel truda i zarabotnoy
platy Nakhodkinskogo porta (for Krutov).
(Cargo handling—Technological innovations)

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48-22-2-7/17

AUTHOR: Krutov, V. A.

TITLE: On the Theory of Internal Conversion.I.(K teorii vnutrenney konversii.I.)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958, Vol. 22, Nr 2, pp. 162 - 170 (USSR)

ABSTRACT: As an introduction already published theories dealing with the same subject are referred to, and the abbreviation CIC is introduced denoting the conception of the "coefficient of internal conversion". In this paper the part played by the higher approximations in the perturbation theory of internal conversion was subjected to a reexamination. It was found that the conceptions on the insignificance of the corrections caused by the higher approximations in the range of small energies and great multipolar nuclear transitions proved to be wrong, and that the most basic process in the physical treatment of the correction of γ -radiation was not taken into account. The present paper consists of two sections. The first part is devoted to a reexamination of the general theory of internal conversion and of the application of the higher approxi-

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48-22-2-7/17

On the Theory of Internal Conversion. I.

mations of perturbation theory, and to the presentation of some conclusions from this general theory. In the chapter: General theory of internal conversion, a system is treated, consisting of a radiation field, a nucleus and n electrons, the initial state of which is characterized by an excited nucleus, the electrons forming the ground state of the atom. The final state is given by a nucleus in its ground state and by one of the electrons in the continuous energy spectrum. In both cases no γ -quanta are present. In the course of the considerations and computations the theory of K. R. Coish is refuted by stating, that it is impossible to maintain the equation $N_+ + N_- = 1$ in arbitrary final approximations because of the application of the method of successive approximation. The following conclusions are drawn here: A factor K is assumed, representing the ratio of the probabilities of γ -radiation of the atom and of the stripped nucleus. It is supposed here that K plays the part of the observable "resolving factor" in the domain of isomers. In the chapter "The interpretation of results" the elements H_+ and H_- are dealt with, the corrections of the higher approximations being separated into two parts, the "interference" and the "quadratic part". In the course of the considerations in

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AP-22-2-7/17

On the Theory of Internal Conversion. I.

this chapter one of the theories by Coish is again refuted by stating that only the interference elements can be comprised in the conception of CIC. In the chapter: "Multipolar exchange" the energy given in this above denomination (exchange of quanta of an 2^L field) is treated that is to say the energy which is produced between the electron 1, which is emitted together with the nucleus because of the interaction and one of the electrons 2 which is located on a discrete level. The electron 1 returns into the discrete spectrum, whereas 2 passes into the continuous one. In the chapter: "The atom shell and multipolarity" it is concluded that the interference of the admixture radiation extinguishes the admixture of electrons having the opposite magnetic quantum numbers. Therefore CIC cannot show any admixtures, the electron admixture of multipolar fields, however, can have importance, for example, in a γ - γ - γ -e-correlation. There are 3 figures, 1 table, and 5 references 2 of which are Soviet.

Card 3/4

On the Theory of Internal Conversion.I.

48-22-2-7/17

ASSOCIATION: Fizicheskiy institut Leningradskogo gos. universiteta im.
A. A. Zhdanova
(Physics Institute of the Leningrad State University imeni
A. A. Zhdanov)

AVAILABLE: Library of Congress

1. Perturbation theory
2. Internal conversion-Theory

Card 4/4

AUTHORS:

Krutov, V. A., Myuller, K.

48-22-2-8/17

TITLE:

On the Theory of Internal Conversion.II (K teorii vnutrenney konversii.II)

PERIODICAL:

Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958, Vol. 22, Nr 2, pp. 171 - 175 (USSR)

ABSTRACT:

In this second part of the paper, the formulae are laid down which can be applied in the computation of the corrections by higher approximations, and the domains are evaluated, where these approximations can reach great values. For the purpose of determinating the possible values of the effects, which are dependent upon the higher approximations of perturbation theory, here the case of the K-shell and of a multipole is subjected to an accurate investigation. The formula here was built up on the basis of the number of γ -quanta (N_γ) and of electrons (N_e). Let here $\hbar = m_0 = c = 1$. As a final result the conservation theorem in the case of infinite approximation is obtained: $N_\gamma(\infty) + N_e(\infty) = 1$. The following is stated with respect to the domains, where the corrections

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49-22-2-8/17

On the Theory of Internal Conversion. II

caused by higher approximations of perturbation theory reach great values, on the basis of formula (12): If $\omega \rightarrow 1$, the value of CIC tends to infinity ("infrared catastrophe"), which is explained by the quick increase of CIC and the reduction of Z (this being given in the tables for the CIC of limit energies). The screening effect can not have any principal influence on this result, because this effect remains the same even at $Z = 1$. Nevertheless the higher approximation can lead to a considerable reduction of the value of CIC, because the nucleus is additionally discharged by γ -radiation through the "electron bridge". From the same equation (12) it can be seen that β_K increases at a reduction of ω , as well as ω^{-L} , δ_K , however, decreasing as $\sqrt{\omega}$. Therefore $\beta_K \delta_K$ decreases at increasing ω . From this it is concluded that for very small energies and great multipole orders of the nuclear transitions the corrections may reach great values. It is remarked here that in the case of γ - γ and of γ -e correlation even an inconsiderable increase of the γ -radiation from the electron bridge can reach considerable values, and this because of the sensitivity of the method of angular correlation. The authors express their gratitude to B. S. Dzhelepov, V. B. Berestetskiy, L. A. Sliv

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46-22-2-8/17

On the Theory of Internal Conversion.II

and Yu. V. Novozhilov for valuable discussions. There are 6 references, 1 of which is Soviet.

ASSOCIATION: Fizicheskiy institut Leningradskogo gos. universiteta im. A. A. Zhdanova
(Institute of Physics, Leningrad State University im. A.A. Zhdanov)

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1. Perturbation theory 2. Internal conversion-Theory

Card 3/3

83761

S/056/60/032/003/010/045
B006/B063

24.4500

AUTHORS: Krutov, V. A., Gorshkov, V. G.

TITLE: Higher Born Approximations¹⁶ in Pair Conversion 17

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 39, No. 3(9), pp. 591-599

TEXT: Quantum-theoretical nuclear problems are frequently treated without considering the nuclear Coulomb field (zeroth Born approximation) since higher approximations with respect to the Coulomb field lead to great difficulties. Particularly great difficulties are encountered when studying nuclear conversion transitions with electron - positron pair production. Expressions for the transition probability have hitherto been obtained only in first Born approximation. The present paper describes an investigation of higher Born approximations with respect to the Coulomb field. A Yukawa potential is taken as the perturbing potential. A passage to the limit of a pure Coulomb field is carried out only in the final formulas. The first part of the paper gives a few general relations which may be used not only for pair conversion but also for describing other effects

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83761

Higher Born Approximations in Pair Conversion S/056/60/039/003/010/045
B006/B063

as, e.g., the photoeffect. Formula (1) gives the matrix element that describes quantum transitions of an electron (positron) under the action of an electromagnetic field. Formula (2) describes the wave functions, and formula (3) the nuclear field. All these formulas are then written down also in momentum representation. The second part deals with nuclear conversion transitions with pair production in higher Born approximations. The third part describes the calculation of the pair conversion probability in first approximation. The calculation is supplemented by various formulas in an appendix. A lecture on the subject of the present paper was delivered by the present authors on the Ninth All-Union Conference on Nuclear Spectroscopy which took place in Khar'kov in January, 1959.

A. I. Akhiezer, V. B. Berestetskiy, A. Z. Dolginov, and K. A. Ter-Martirosyan are mentioned. The authors thank B. S. Dzhelepov and L. A. Sliv for discussions and advice. There are 5 references: 3 Soviet, 1 British, and 1 US.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskii institut Akademii nauk SSSR (Leningrad Institute of Physics and Technology of the Academy of Sciences USSR)

SUBMITTED: March 1, 1960

Card 2/2

KRUTOV, V.A.

PHASE I BOOK EXPLOITATION

SOV/5914

Akademiya nauk SSSR. Fiziko-tekhnicheskiy institut im. A. F. Ioffe

Gamma-luchi (Gamma Rays) Moscow, Izd-vo AN SSSR, 1961. 720 p.
Errata slip inserted. 3300 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Fiziko-tekhnicheskiy institut
im. A. F. Ioffe.

Resp. Ed.: L. A. Sliv, Doctor of Physics and Mathematics; Ed. of
Publishing House: N. K. Zaychik; Tech. Ed.: A. V. Smirnova.

PURPOSE: This book is intended for theoretical and experimental
physicists working in the field of nuclear spectroscopy and in
related fields where gamma rays are utilized. It may also be
useful to advanced students of physics.

COVERAGE: The book, representing a symposium of papers whose authors
are specialists in their areas, attempts to provide the fullest
possible coverage of theoretical and experimental methods of

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Gamma Rays

SOV/5914

determining nuclear gamma-radiation characteristics and the use of gamma rays to study matter, particularly nuclear structure. The book contains a large number of tables, graphs, and nomographs and can be used as an encyclopedical manual on gamma rays. No personalities are mentioned. References accompany each part.

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